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ANNEXES 1 to 14

ANNEXES

to the

Proposal for a Regulation of the European Parliament and of the Council

concerning batteries and waste batteries, repealing Directive 2006/66/EC and amending Regulation (EU) No 2019/1020

ANNEX I
Restrictions on hazardous substances

Designation of the substance or group of substances	Conditions of restriction
1. Mercury CAS No. 7439-97-6 EC No. 231-106-7 and its compounds	1. Batteries, whether or not incorporated into appliances, shall not contain more than 0,0005 % of mercury (expressed as mercury metal) by weight. 2. Batteries used in vehicles to which Directive 2000/53/EC applies shall not contain more than 0,1% of mercury (expressed as mercury metal) by weight in homogeneous material.
2. Cadmium CAS No. 7440-43-9 EC No. 231-152-8 and its compounds	1. Portable batteries, whether or not incorporated into appliances, shall not contain more than 0,002% of cadmium (expressed as cadmium metal) by weight. 2. The restriction set out in point 1 shall not apply to portable batteries intended for use in: (a) emergency and alarm systems, including emergency lighting; (b) medical equipment. 3. Batteries used in vehicles to which Directive 2000/53/EC applies shall not contain more than 0,01% of cadmium (expressed as cadmium metal) by weight in homogeneous material. 4. The restriction set out in point 3 does not apply to vehicles that benefit from an exemption on the basis of Annex II to Directive 2000/53/EC.

ANNEX II
Carbon footprint

1. Definitions

For the purposes of this Annex, the following definitions shall apply:

(a) 'Activity data' means the information associated with processes while modelling Life Cycle Inventories (LCI). The aggregated LCI results of the process chains that represent the activities of a process are each multiplied by the corresponding activity data and then combined to derive the environmental footprint associated with that process;

(b) 'Bill of materials' means list of the raw materials, sub-assemblies, intermediate assemblies, sub-components, parts and the quantities of each needed to manufacture the product in scope of the study;

(c) 'Company-specific data' refers to directly measured or collected data from one or multiple facilities (site-specific data) that are representative for the activities of the company. It is synonymous to "primary data";

(d) 'Functional unit' means the qualitative and quantitative aspects of the function(s) and/or service(s) provided by the product being evaluated;

(e) 'Life cycle' means the consecutive and interlinked stages of a product system, from raw material acquisition or generation from natural resources to final disposal (ISO 14040:2006);

(f) 'Life cycle inventory (LCI)' means the combined set of exchanges of elementary, waste and product flows in a LCI dataset;

(g) 'Life cycle inventory (LCI) dataset' means a document or file with life cycle information of a specified product or other reference (e.g., site, process), covering descriptive metadata and quantitative life cycle inventory. A LCI dataset could be a unit process dataset, partially aggregated or an aggregated dataset;

(h) 'Reference flow' means the measure of the outputs from processes in a given product system required to fulfil the function expressed by the functional unit (based on ISO 14040:2006);

(i) 'Secondary data' means data not from a specific process within the supply-chain of the company performing a carbon footprint study. This refers to data that is not directly collected, measured, or estimated by the company, but sourced from a third party LCI database or other sources. Secondary data includes industry average data (e.g., from published production data, government statistics, and industry associations), literature studies, engineering studies and patents, and may also be based on financial data, and contain proxy data, and other generic data. Primary data that go through a horizontal aggregation step are considered as secondary data;

(j) 'System boundary' means the aspects included or excluded from the life cycle study.

Additionally, the harmonised rules for the calculation of the carbon footprint of batteries shall include any further definition necessary for their interpretation.

2. Scope

This Annex provides essential elements on how to calculate the carbon footprint.

The harmonised calculation rules referred to in Article 7 shall build on the essential elements included in this Annex, be in compliance with the latest version of the Commission Product

Environmental Footprint[1] (PEF) method and relevant Product Environmental Footprint Category Rules (PEFCRs)[2] and reflect the international agreements and technical/scientific progress in the area of life cycle assessment[3].

The calculation of the life cycle carbon footprint shall be based on the bill of material, the energy, and auxiliary materials used in a specific plant to produce a specific battery model. In particular, the electronic components (e.g. battery management units, safety units) and the cathode materials have to be accurately identified, as they may become the main contributor for the battery carbon footprint.

3. Functional unit and reference flow

The functional unit is further defined as one kWh (kilowatt-hour) of the total energy provided over the service life by the battery system, measured in kWh. The total energy is obtained from the number of cycles multiplied by the amount of delivered energy over each cycle.

The reference flow is the amount of product needed to fulfil the defined function and shall be measured in kg of battery per kWh of the total energy required by the application over its service life. All quantitative input and output data collected by the manufacturer to quantify the carbon footprint shall be calculated in relation to this reference flow.

4. System boundary

The following life cycle stages and processes shall be included in the system boundary:

Life cycle stage	**Short description of the processes included**
Raw material acquisition and pre-processing	Includes mining and pre-processing, up to the manufacturing of battery cells and batteries components (active materials, separator, electrolyte, casings, active and passive battery components), and electric/electronics components.
Main product production	Assembly of battery cells and assembly of batteries with the battery cells and the electric/electronic components
Distribution	Transport to the point of sale
End of life and recycling	Collection, dismantling and recycling

The following processes shall be excluded:

- Manufacturing of equipment for batteries assembly and recycling, as impacts have been calculated as negligible in the PEFCRs for high specific energy rechargeable batteries for mobile applications;
- Battery assembly process with the original equipment manufacturer (OEM) system components. It mainly corresponds to mechanical assembly, and it is included inside the OEM equipment or vehicle assembly line. The specific energy or material consumption for this process are negligible when compared to the manufacturing process of OEM components.

The use phase should be excluded from the lifecycle carbon footprint calculations, as not being under the direct influence of manufacturers unless it is demonstrated that choices made

[1] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013H0179&from=EN
[2] https://ec.europa.eu/environment/eussd/smgp/pdf/PEFCR_guidance_v6.3.pdf
[3] See https://ec.europa.eu/environment/eussd/smgp/dev_methods.htm

by battery manufacturers at the design stage can make a non-negligible contribution to this impact.

5. Use of company specific and secondary datasets

Due to the high number of battery components and the complexity of the processes, the economic operator shall limit, where justified, the use of company specific data to process and component analysis to the battery-specific parts.

In particular, all activity data related to the battery's anode, cathode, electrolyte, separator and cell-casing shall refer to a specific battery model produced in a specific production plant (i.e., no default activity data shall be used). The battery-specific activity data shall be used in combination with the relevant Product Environmental Footprint compliant secondary datasets.

As the carbon footprint declaration shall be specific to a model battery produced in a defined production site, sampling of data collected from different plants producing the same battery model should not be allowed.

A change in the bill of materials or energy mix used to produce a battery model requires a new calculation of the carbon footprint for that battery model.

The harmonised rules to be elaborated via a delegated act shall include detailed modelling of the following lifecycle stages:

- Raw material acquisition and pre-processing stage
- Production stage
- Distribution
- Own electricity production
- End of life stage

6. Carbon footprint impact assessment

The carbon footprint of the battery shall be calculated using the "climate change" life cycle impact assessment method recommended in the 2019 Joint Research Centre (JRC) report available at https://eplca.jrc.ec.europa.eu/permalink/PEF_method.pdf .

The results shall be provided as characterised results (without normalisation and weighting). The list of characterization factors to be used is available at https://eplca.jrc.ec.europa.eu/EnviromentalFootprint.html.

7. Offsets

Offsets are calculated relative to a baseline that represents a hypothetical scenario for what emissions would have been in the absence of the mitigation project that generates the offsets.

Offsets shall not be included in the carbon footprint declaration, but may be reported separately as additional environmental information and used for communication purposes.

8. Carbon footprint performance classes

Depending on the distribution of the values of the batteries' carbon footprint declarations placed in the EU internal market, a meaningful number of classes of performance will be identified, with category A being the best class with the lowest carbon footprint life cycle impact, to allow for market differentiation.

The identification of the threshold for each class of performance, as well as their width, will be based on the distribution of performances of the batteries placed on the market in the

previous 3 years, the expected technological improvements, and other technical factors to be identified.

The Commission shall review the number of performance classes and the thresholds between them every three years in order to keep them representative of the market reality and its expected development.

9. Maximum carbon thresholds

Based on the information collected through the carbon footprint declarations and the relative distribution of the carbon footprint performance classes of battery models placed on the market, and taking into account the scientific and technical progress in the field, the Commission will identify maximum lifecycle carbon footprint thresholds for rechargeable industrial and electric vehicle batteries, further to a dedicated impact assessment to determine those values.

In proposing maximum carbon footprint thresholds, the Commission will take into account the relative distribution of the carbon footprint values in batteries on the market, the extent of progress in the reduction of carbon footprint of batteries placed on the Union market and the effective and potential contribution of this measure to the Union's objectives on sustainable mobility and climate neutrality by 2050.

ANNEX III

Electrochemical performance and durability parameters for portable batteries of general use

1. Battery capacity, electric charge which a battery can deliver under a specific set of conditions.
2. Minimum average duration, minimum average time on discharge when used in specific applications, depending on the type of battery.
3. Shelf life (delayed discharge performance), the relative decrease of the minimum average duration after a defined period of time and specific conditions.
4. Endurance in cycles (for rechargeable batteries), the capacity of the battery after a pre-established number of charge and discharge cycles.
5. Resistance to leakage, i.e. resistance to unplanned escape of electrolyte, gas or other material (poor, good or excellent).

ANNEX IV
Electrochemical performance and durability requirements for rechargeable industrial batteries and electric vehicle batteries

Part A

Parameters related to the electrochemical performance and durability

1. Rated capacity (in Ah) and capacity fade (in %).
2. Power (in W) and power fade (in %).
3. Internal resistance (in Ω) and internal resistance increase (in %).
4. Energy round trip efficiency and its fade (in %).
5. An indication of their expected life-time under the conditions for which they have been designed.

'*Rated capacity*' means the total number of ampere-hours (Ah) that can be withdrawn from a fully charged battery under specific conditions.

'*Capacity fade*' means the decrease over time and upon usage in the amount of charge that a battery can deliver at the rated voltage, with respect to the original rated capacity declared by the manufacturer.

'Power' means the amount of energy that a battery is capable to provide over a given period of time.

'Power fade' means the decrease over time and upon usage in the amount of power that a battery can deliver at the rated voltage.

'*Internal resistance*' means the opposition to the flow of current within a cell or a battery, that is, the sum of electronic resistance and ionic resistance to the contribution to total effective resistance including inductive/capacitive properties.

'*Energy round trip efficiency*' means the ratio of the net energy delivered by a battery during a discharge test to the total energy required to restore the initial State of Charge by a standard charge.

Part B

Elements for explanation of the measurements made for parameters listed in Part A

1. Applied discharge rate and charge rate.
2. Ratio between maximum allowed battery power (W) and battery energy (Wh).
3. Depth of discharge in the cycle-life test.
4. Power capability at 80% and 20% state of charge.
5. Any calculations performed with the measured parameters, if applicable.

ANNEX V
Safety parameters

1. Thermal shock and cycling

This test shall be designed to evaluate changes in the integrity of the battery arising from expansion and contraction of cell components upon exposure to extreme and sudden changes in temperature and potential consequences of such changes. During a thermal shock the battery shall be exposed to two temperature limits and held at each temperature limit for a specified period of time.

2. External short circuit protection

This test shall evaluate the safety performance of a battery when applying an external short circuit. The test can evaluate the activation of the overcurrent protection device or the ability of cells to withstand the current without reaching a hazardous situation (e.g. thermal runaway, explosion, fire). The main risk factors are heat generation at cell level and electrical arcing which may damage circuitry or may lead to reduced isolation resistance.

3. Overcharge protection

This test shall evaluate the safety performance of a battery in overcharge situations. The main safety risks during overcharge are the decomposition of the electrolyte, cathode and anode breakdown, exothermic decomposition of the solid electrolyte interphase (SEI) layer, separator degradation, and the Li plating, which can lead to self-heating of the battery and thermal runaway. The factors affecting the outcome of the test shall include, at least, the charging rate and the finally reached state-of-charge (SOC). The protection can be ensured by either voltage control (interruption after reaching the limit charging voltage) or current control (interruption after exceeding maximum charging current).

4. Over-discharge protection

This test shall evaluate the safety performance of a battery in over-discharge situations. Safety risks during over-discharge include polarity reversal leading to oxidation of the anode current collector (Copper) and to plating on the cathode side. Even minor over-discharge may cause dendrite formation and finally short circuit.

5. Over-temperature protection

This test shall evaluate the effect of temperature control failure or failure of other protection features against internal overheating during operation.

6. Thermal propagation

This test shall evaluate the safety performance of a battery in thermal propagation situations. A thermal runaway in one cell can cause a cascading reaction through the entire battery which can be composed of numerous cells. It can lead to severe consequences including a significant gas release. The test shall take into account the tests under development for transport applications by ISO and UN GTR.

7. Mechanical damage by external forces (drop and impact)

These tests shall simulate one or more situations in which a battery accidentally drops or is impacted by a heavy load and remains operational for the purpose for which it was designed. The criteria to simulate these situations should reflect real life uses.

8. Internal short circuit

This test shall evaluate the safety performance of a battery in internal short-circuit situations The occurrence of internal short circuits, one of the main concerns for battery manufacturers, potentially leads to venting, thermal runaway, along with sparking which can ignite the electrolyte vapours escaping from the cell. The generation of these internal shorts can be triggered by manufacturing imperfections, presence of impurities in the cells or dendritic growth of lithium, and leads to most of in-field safety incidents. Multiple internal short circuits scenarios are possible (e.g. electrical contact of cathode/anode, aluminium current collector/copper current collector, aluminium current collector /anode) each with a different contact resistance.

9. Thermal abuse

During this test, the battery shall exposed to elevated temperatures (in IEC 62619 this is 85 °C) which can trigger exothermal decomposition reactions and lead to a thermal runaway of the cell.

Proper considerations to the risk of toxic gases emitted from non-aqueous electrolytes should be made for all safety parameters listed in points 1 to 9.

ANNEX VI
Labelling requirements

Part A
General information about batteries

Information on the label of batteries:

1. the manufacturer’s name, registered trade name or trade mark;
2. the battery type, batch or serial number of the battery or other element allowing its unequivocal identification;
3. battery model identifier;
4. date of manufacture;
5. date of placing on the market;
6. chemistry;
7. hazardous substances contained in the battery other than mercury, cadmium or lead;
8. critical raw materials contained in the battery.

Part B
Symbol for separate collection of batteries

Part C
QR code

The QR code shall be 100% black and of a size that is easily readable by a commonly available QR reader, such as those integrated in hand-held communication devices.

ANNEX VII

Parameters for determining the state of health of batteries and expected lifetime of batteries

Parameters for determining the state of health of batteries:

1. Remaining capacity;
2. Overall capacity fade;
3. Remaining power capability and power fade;
4. Remaining round trip efficiency;
5. Actual cooling demand;
6. Evolution of self-discharging rates;
7. Ohmic resistance and/or electrochemical impedance.

Parameters for determining the expected lifetime of batteries:

1. The dates of manufacturing of the battery and putting into service;
2. Energy throughput;
3. Capacity throughput.

ANNEX VIII
Conformity assessment procedures

Part A

MODULE A - INTERNAL PRODUCTION CONTROL

1. Description of the module

Internal production control is the conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in points 2, 3 and 4, and ensures and declares that the battery satisfies the requirements set out in Articles 6, 9, 10, 11, 12, 13 and 14 that apply to them.

2. Technical documentation

The manufacturer shall draw up the technical documentation. The documentation shall make it possible to assess the battery's conformity with the relevant requirements referred to in point 1.

The technical documentation shall specify the applicable requirements and cover, as far as relevant for the assessment, the design, manufacture and intended use of the battery. The technical documentation shall contain, where applicable, at least the following elements:

(a) a general description of the battery and its intended use;

(b) conceptual design and manufacturing drawings and schemes of components, sub-assemblies, circuits;

(c) descriptions and explanations necessary for the understanding of the drawings and schemes referred to in point (b) and the operation of the battery;

(d) a list which includes:

  (i) the harmonised standards referred to in Article 15, applied in full or in part;

  (ii) the common specifications referred to in Article 16, applied in full or in part;

  (iii) other relevant technical specifications used for measurement or calculation purposes;

  (iv) an indication of which parts of the harmonised standards referred to in point (i) and the common specifications referred to in point (ii) that have been applied;

  (v) where the harmonised standards referred to in point (i) and the common specifications referred to in point (ii) have not been applied, a description of the solutions adopted to meet the requirements referred to in point 1.

(e) test reports.

3. Manufacturing

The manufacturer shall take all measures necessary so that the manufacturing process and its monitoring ensure compliance of the battery with the technical documentation referred to in point 2 and with the requirements referred to in point 1.

4. CE marking and EU declaration of conformity

The manufacturer shall affix the CE marking to each individual packaging of the battery model that satisfies the requirements referred to in point 1, or, where it is supplied without packaging, in a document accompanying the battery model.

The manufacturer shall draw up an EU declaration of conformity for each battery model in accordance with Article 18 and keep it together with the technical documentation at the

disposal of the national authorities for ten years after the last battery belonging to the respective battery model has been placed on the market.

A copy of the EU declaration of conformity shall be made available to the relevant authorities of the Member States upon request.

5. Authorised representative

The manufacturer's obligations set out in point 4 may be fulfilled by his or her authorised representative, on his or her behalf and under his or her responsibility, provided that they are specified in the mandate.

Part B

MODULE A1 - INTERNAL PRODUCTION CONTROL PLUS SUPERVISED VERIFICATION

1. Description of the module

Internal production control plus supervised verification is the conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in points 2, 3, 4, and 5, and ensures and declares that the battery satisfy the requirements set out in Articles 7, 8 and 39 that are applicable.

2. Technical documentation

The manufacturer shall draw up the technical documentation. The documentation shall make it possible to assess the battery's conformity with the requirements referred to in point 1, and shall include an adequate analysis and assessment of the risk(s).

The technical documentation shall specify the applicable requirements referred to in point 1 and cover, as far as relevant for the assessment, the design, manufacture and operation of the battery. The technical documentation shall contain, wherever applicable, at least the following elements:

(a) a general description of the battery;

(b) conceptual design and manufacturing drawings and schemes of components, sub-assemblies, circuits.;

(c) descriptions and explanations necessary for the understanding of the drawings and schemes referred to in point (b) and the operation of the battery;test reports.

3. Manufacturing

The manufacturer or the importer that places the battery on the Union market shall take all measures necessary so that the manufacturing process and its monitoring ensure compliance of the manufactured products with the technical documentation referred to in point 2 and with the applicable requirements referred to in point 1.

4. Product and information checks

For each battery model, and where applicable, for each batch that the manufacturer or the importer places on the Union market, the mentioned economic operator shall carry out one or more tests on one or more specific aspects of the battery model or batch of batteriesin order to verify conformity with the corresponding requirements referred to in point 1. For large battery batches, the manufacturer, the authorised representative or the importer shall choose a statistically representative sample of batteries.

The manufacturer, or the importer that places the battery model on the Union market, shall submit the information and documents referred to in Articles 7, 8 and 39 of this Regulation to

the notified body for verification of compliance with the applicable requirements and obligations in those Articles, as well as in applicable implementing measures.

5. CE marking and EU declaration of conformity

The manufacturershall affix the CE marking and, under the responsibility of the notified body referred to in point 4, the latter’s identification number to each battery, or to the packaging thereof, that satisfies the applicable requirements of this Regulation.

The manufacturer shall draw up a an EU declaration of conformity for each battery model in accordance with Article 18 and keep it together with the technical documentation at the disposal of the national authorities for ten years after the last battery belonging to the respective model has been placed on the market.

A copy of the EU declaration of conformity shall be made available to the relevant authorities of Member States upon request.

6. Authorised representative

The manufacturer's obligations set out in points 4 and 5 may be fulfilled by the manufacturer’s authorised representative, on the manufacturer’s behalf and under the manufacturer’s responsibility, provided that they are specified in the mandate.

ANNEX IX
EU Declaration of conformity No …

1. Battery model (product, type, batch or serial number):
2. Name and address of the manufacturer and, where applicable, his authorised representative
3. This declaration of conformity is issued under the sole responsibility of the manufacturer
4. Object of the declaration (identification of the battery allowing traceability): description of the battery.
5. The object of the declaration described in point 4 is in conformity with the relevant Union harmonisation legislation: … (reference to the other Union acts applied).
6. References to the relevant harmonised standards or the common specifications used or references to the other technical specifications in relation to which conformity is declared:
7. The notified body … (name, address, number) … performed … (description of intervention) … and issued the certificate(s): … (details, including its date, and, where appropriate, information on the duration and conditions of its validity).
8. Additional information

Signed for and on behalf of:

(place and date of issue):

(name, function) (signature)

ANNEX X
List of raw materials and risk categories

1. Raw materials:
   (a) cobalt;
   (b) natural graphite;
   (c) lithium;
   (d) nickel;
   (e) chemical compounds based on the raw materials listed in points (a) to (f) which are necessary for the manufacturing of the active materials of batteries.
2. Social and environmental risk categories:
   (a) air;
   (b) water;
   (c) soil;
   (d) biodiversity;
   (e) human health;
   (f) occupational health and safety;
   (g) labour rights, including child labour;
   (h) human rights;
   (i) community life.
3. The international instruments covering the risks referred to in point 2 include:
   (a) Ten Principles of the United Nations Global Compact;
   (b) UNEP Guidelines for Social Life Cycle Assessment of Products;
   (c) Convention on Biological Diversity Decision COP VIII/28- Voluntary guidelines on Biodiversity-Inclusive impact assessment;
   (d) ILO Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy;
   (e) OECD Due Diligence Guidance for Responsible Business Conduct; and
   (f) OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

ANNEX XI

Calculation of collection rates of waste portable batteries

1. Producers or, where appointed in accordance with Article 47(2), producer responsibility organisations acting on their behalf, and Member States shall calculate the collection rate as the percentage obtained by dividing the weight of waste portable batteries excluding waste batteries from light means of transport, collected in accordance with Article 48 and Article 55, respectively, in a given calendar year in a Member State by the average weight of such batteries that producers either sell directly to end-users or deliver to third parties in order to sell them to end-users in that Member State during that year and the preceding two calendar years.

2. Producers or, where appointed in accordance with Article 47(2), producer responsibility organisations acting on their behalf, and Member States shall calculate the annual sales of portable batteries, excluding batteries from light means of transport, to end-users in a given year, as the weight of such batteries made available on the market for the first time withinthe territory of the Member State in the year concerned, excluding any portable batteries that have left the territory of that Member State in that year before being sold to the end users.

3. For each battery, only the first time it is made available on the market in a Member State shall be counted.

4. The calculation provided for in points 2 and 3 shall be based on collected data or statistically significant estimates based on collected data.

ANNEX XII
Treatment and recycling requirements

Part A
Treatment requirements

1. Treatment shall, as a minimum, include removal of all fluids and acids.

2. Treatment and any storage, including temporary storage, at treatment facilities shall take place in sites with impermeable surfaces and suitable weatherproof covering or in suitable containers.

3. Waste batteries in treatment facilities shall be stored in such a way that waste batteries are not mixed with waste from conductive or combustible materials.

4. Special precautions and safety measures shall be in place for the treatment of waste lithium based batteries that shall be protected from exposure to excessive heat, water, or any crushing or physical damage during handling, sorting and storage.

Part B
Recycling efficiencies

1. No later than 1 January 2025, recycling processes shall achieve the following minimum recycling efficiencies:

   (a) recycling of 75 % by average weight of lead-acid batteries;

   (b) recycling of 65 % by average weight of lithium-based batteries;

   (c) recycling of 50 % by average weight of other waste batteries.

2. No later than 1 January 2030, recycling processes shall achieve the following minimum recycling efficiencies:

   (a) recycling of 80 % by average weight of lead-acid batteries;

   (b) recycling of 70 % by average weight of lithium-based batteries.

Part C
Levels of recovered materials

1. No later than 1 January 2026, all recycling processes shall achieve the following levels of materials recovery:

   (a) 90 % for cobalt;

   (b) 90 % for copper;

   (c) 90 % for lead;

   (d) 35 % for lithium;

   (e) 90 % for nickel.

2. No later than 1 January 2030, all recycling processes shall achieve the following levels of materials recovery:

   (a) 95 % for cobalt;

   (b) 95 % for copper;

   (c) 95 % for lead;

   (d) 70 % for lithium;

(e) 95 % for nickel.

ANNEX XIII
Information to be stored in the European Electronic Exchange System

Information and data shall be treated in accordance with Commission Decision (EU, Euratom) 2015/443[4]. The specific cyber-security arrangements of Commission Decision (EU, Euratom) 2017/46[5] and its implementing rules shall apply. The confidentiality level shall reflect the consequential harm that may result from disclosure of the data to unauthorised persons.

1. PUBLICLY ACCESSIBLE PART OF THE SYSTEM

Information to be stored and made available in the publicly accessible part of the system by the economic operator that places a battery on the market:

(a) Battery manufacturer;

(b) Battery type;

(c) General description of the model, sufficient for it to be unequivocally and easily identified, including the date of placing in the market;

(d) Manufacturing place and date;

(e) Battery composition, including critical raw materials;

(f) Carbon footprint information in the units indicated in the relevant implementing measure(s);

(g) Information on responsible sourcing as indicated in the relevant implementing measure(s);

(h) Recycled content information as indicated in the relevant implementing measure(s);

(i) Rated capacity (in Ah);

(j) Minimal, nominal and maximum voltage, with temperature ranges when relevant;

(k) Original power capability (in Watts) and limits, with temperature range when relevant ;

(l) Expected battery lifetime expressed in cycles, and reference test used ;

(m) Capacity threshold for exhaustion (only for EV batteries);

(n) Temperature range the battery can withstand when not in use (reference test);

(o) Period for which the commercial warranty for the calendar life applies;

(p) Initial round trip energy efficiency and at 50% of cycle-life;

(q) Internal battery cell and pack resistance;

(r) C-rate of relevant cycle-life test.

[4] Commission Decision (EU, Euratom) 2015/443 of 13 March 2015 on Security in the Commission (OJ L 72, 17.3.2015, p. 41)

[5] Commission Decision (EU, Euratom) 2017/46 of 10 January 2017 on the security of communication and information systems in the European Commission (OJ L 6, 11.1.2017, p. 40)

2. REQUIREMENTS FOR THE PART OF THE SYSTEM ACCESSIBLE ONLY TO ACCREDITED ECONOMIC OPERATORS AND THE COMMISSION

The part of the system that shall be accessible only to accredited remanufacturers, second-life operators and recyclers shall contain:

(a) Detailed composition, including materials used in the cathode, anode and electrolyte;

(b) Part numbers for components and contact details of sources for replacement spares;

(c) Dismantling information, including at least:

- Exploded diagrams of the battery system/pack showing the location of battery cells,
- Disassembly sequences,
- Type and number of fastening techniques to be unlocked,
- Tools required for disassembly,
- Warnings if risk of damaging parts exist,
- Amount of cells used and layout;

(d) Safety measures.

3. REQUIREMENTS FOR THE PART OF THE SYSTEM ACCESSIBLE ONLY TO NOTIFIED BODIES, MARKET SURVEILLANCE AUTHORITIES AND THE COMMISSION

(a) Results of tests reports proving compliance with the requirements laid out in this Regulation, and its implementing or delegated measures.

ANNEX XIV
Correlation table

Directive 2006/66/EC	This Regulation
Article 1	Article 1
Article 1 first subparagarph point1	Article 1(1)
Article 1 subparagraph 1 point 2	Article 1(1)
Article 1, second subparagraph	---
Article 2	Article 1(2) and (3)
Article 2(1)	Article 1(2)
Article 2(2)	Article 1(3)
Article 2(2)(a)	Article 1(3)(a)
Article 2(2)(b)	Article 1(3)(b)
Article 3	Article 2
Article 3 point 1	Article 2 point 1
Article 3 point 2	---
Article 3 point 3	Article 2 point 7
Article 3 point 4	---
Article 3 point 5	Article 2 point 10
Article 3 point 6	Article 2 point 11
Article 3 point 7	Article 2 point 39
Article 3 point 8	Article 2 point 49
Article 3 point 9	---
Article 3 point10	Article 2 point 42
Article 3 point 11	Article 2 point 23
Article 3 point 12	Article 2 point 37
Article 3 point 13	Article 2 point 55
Article 3 point 14	Article 2 point 14
Article 3 point 15	Article 2 point 19
Article 3 point 16	---
Article 3 point 17	---
Article 4	Article 6
Article 4(1)	Annex I
Article 4(1)(a)	Annex I first entry point 1
Article 4(1)(b)	Annex I second entry points 1 to 3

Directive 2006/66/EC	This Regulation
Article 4(2)	---
Article 4(3)	Annex I second entry point 2
Article 4(3)(a)	Annex I second entry point 2 (a)
Article 4(3)(b)	Annex I second entry point 2 (b)
Article 4(3)(c)	---
Article 4(4)	---
Article 5	---
Article 6	Article 3
Article 6(1)	Article 3(1)
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